World Health Organization

Pilot initiative: Integrating assistive technology into health services in Tajikistan

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1. Context

Assistive technology (AT) enables and promotes inclusion and participation, especially for people with a disability, aging populations, and people with non-communicable diseases. The primary purpose of assistive products - like reading glasses and walking sticks - is to maintain or improve a person's function and independence, promoting their wellbeing.

Globally, it is estimated that 2.5 billion people require one or more assistive products; however, people's access to the assistive products they need is as low as 3% in some countries[1] even though access to AT is recognized as a fundamental human right in the United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD)[2].

2. Background

In 2018, the Government of Tajikistan renewed its commitment to ensuring access to AT by signing the CRPD[3]. The government also demonstrated political will to further develop its' AT sector by publishing a national Priority Assistive Products List (APL)[4] to ensure that assistive products are of sufficient high quality and are provided through appropriate services.

Even with these commendable efforts, research suggested that only a small fraction of people in need of AT services and assistive products in Tajikistan have access[5] and a situational analysis carried out by the World Health Organization (WHO) in 2019 identified the following challenges:



Field research also highlighted that assistive products were often distributed without appropriate service provision resulting in inappropriate or ill-fitting products. In addition, user training, repairs and follow up were not included in service procedures[6].

[1] WHO and UNICEF (2022) p.23
[2] UNCRPD (2006) article 20
[3] UNCRPD (2006)
[4] WHO (2016)
[5] WHO Regional Office for Europe (2019) p.14
[6] Ibid. p.9

3. Project overview

In response to the identified need to strengthen Tajikistan's AT sector aligned with the Tajikistan National Programme on Rehabilitation of Persons with Disabilities (2017–2020), WHO supported the government to pilot an initiative integrating AT into health services in Dushanbe and an adjoining district.

The two-year project aimed to expand and strengthen the AT sector in Tajikistan, in terms of service provision infrastructure, personnel and the range and quality of assistive products available. There were two main objectives:

Objective 1: Create a pilot initiative integrating priority assistive product provision with scope of scaling to a sustainable, countrywide AT programme.

Objective 2: Develop a government-led, model country initiative for other countries to draw on as they look at improving access to AT.

3.1 Partners and stakeholders

In Tajikistan, public provision of AT is centralized under the National Orthopaedic Centre (NOC) and the Ministry of Health and Social Protection (MoHSP). The following organizations were key partners and stakeholders for this project:

Partners

- Ministry of Health and Social Protection (MoHSP)
- National Orthopaedic Centre (NOC)
- Rudaki District Health Centre (DHC)
- Rudaki Rural Health Centres (RHCs)
- Dushanbe Hospital
- Health outposts

Stakeholders

- Ministry of Finance (MoF)
- Ministry of Economics and Trade
- Ministry of Education
- Health personnel
- Workforce educators
- Service users

Implementation and technical support

The project was implemented by the WHO country office in Tajikistan under guidance of the WHO Regional Office for Europe and the Public Health, Innovation, and Intellectual Property (PHI) teams at WHO headquarters.

4. Project achievements

Table 1 shows the key outcomes and outputs of the project across the WHO-GATE (Global Cooperation on Assistive Technology) 5P framework for strengthening AT which includes: policy, products, personnel, provision, and people. Further detail about project activities and outcomes has also been provided across these areas.

Policy		• Hosted a high-level disability forum bringing together key stakeholders to assess the AT sector and to set future AT goals, resulting in a government resolution recognizing AT as a fundamental aspect of rehabilitation and disability rights. • APL standards and specifications agreed and endorsed by the government. • Rapid AT Assessment (rATA) completed to identify unmet assistive product need to inform the MoF budget. As a result, six policy recommendations were formulated aimed at strengthening the AT sector and supporting universal health coverage for AT. • The new Tajikistan National Health Strategy (2021–2030) was adopted which included AT and provision through primary healthcare centres (PHCs).
Products		• 6 281 high-quality assistive products were procured from 23 product categories including: wheelchairs, walking aids, shower chairs, incontinence products, reading glasses, magnifiers, white canes, and hearing aids. • Assistive products were procured using draft WHO product technical specifications.
Personnel		109 personnel (31% female and 69% male) were trained on assistive product screening, provision and procurement or attended policy briefings: • 64 trained in procurement; • Eight received refresher training on the Wheelchair Service Training Package Basic (WSTP-b); • 25 attended Training in Assistive Products (TAP) sessions on simple assistive products; • 12 attended government and stakeholder sessions and participated in the first day of TAP.
Provision		• A four-tiered AT referral pathway was adopted by a ministerial resolution including health outposts, RHCs, DHCs and the NOC. • 73% of products were provided at community level via PHCs. • All assistive products were provided by trained staff. • New service units were established for vision and hearing. • The NOC started upgrading an AT centre with staff and capacity to provide different types of assistive products.
People		4 177 direct beneficiaries (51% female and 49% male) were provided with assistive products using a user centred approach to provision.

Table 1: Summary of outcomes and outputs

4.1 Policy

Hosted a national stakeholder workshop to launch the project.

In October 2019, the first high-level national disability forum was hosted in Tajikistan. This brought together the government, civil society, and AT suppliers to evaluate the current disability and AT situation in the country, and to set future goals. The forum was also a platform to introduce the initiative to integrate AT into health services to stakeholders.

An AT exhibition featuring local and international suppliers was also organized. During the forum the Government of Tajikistan renewed their commitment to providing universal access to AT. Following the event, a government resolution was adopted recognizing AT as a fundamental aspect of rehabilitation and disability rights.

Hosted a workshop on the national APL standards and specifications.

In November 2019, a two-day workshop on AT procurement, standards and specifications took place in Dushanbe including government officials from 10 countries[7] and Tajik disabled people's organizations. Experts on assistive products and assistive product specification (APS) requirements presented. This was followed by a panel discussion examining how to improve the efficiency of national tenders[8].

APSs have been drafted for each of the 30 products on the Tajik APL to introduce minimum quality requirements and list all essential product variations needed for procurement, which has been endorsed by the Government of Tajikistan.

Reforming and strengthening AT financing mechanism through policy dialogue and developing recommendations on AT service provision in Tajikistan.

The first policy roundtable was held at the MoHSP in December 2019. Thirteen government ministry and organizational representatives[9] attended, highlighting the need to review the eligibility criteria for government-funded assistive products to include people who are not registered as disabled. This required an increase of the government AT budget.

To justify an increase in public expenditure the MoF requested more evidence on the total unmet need for AT. In March 2021, 20 enumerators and supervisors were trained to interview 2 510 people (377 households) in the Rudaki district using WHO rATA to record met and unmet AT needs to inform future policy.

[7] Including Armenia, Bulgaria, Georgia, Kyrgyzstan, Moldova, Russia, Serbia, Turkmenistan, Ukraine, Tajikistan.
[8] Based on experiences from China, Norway, Tajikistan, and South Africa.
[9] Ministry of Health and Social Protection of the Population, Ministry of Finance, Agency for Public Procurement of Goods, Works and Services, Agency of Standards, National Orthopaedic Centre, World Health Organization.

It was found that approximately half of respondents were experiencing functional difficulties in multiple functional domains. In total, 13% of respondents reported a need for 564 assistive products, leading to an estimate of over 2 million assistive products needed across the country. It was also highlighted that there is a current unmet need of around 7%.

Following the rATA survey, AT dialogue with key stakeholders[10] resumed in 2021 after being on hold due to the COVID-19 emergency response. The following policy recommendations were formulated aimed at strengthening the AT sector and supporting universal health coverage for AT:

1. Provide AT to all persons in need[11].
2. Increase government provision of AT through increasing budget for procurement and expanding the assistive product range based on the national APL.
3. Enforce minimum quality standards for assistive products.
4. Ensure most assistive products are provided by district services and more complex assistive products at specialist centres. Establish a National Assistive Technology Centre to provide all assistive products through a single window.
5. Strengthen services and train personnel for the provision of assistive products.
6. Provide 'simple' assistive products within the community.

At a meeting in June 2021, the preliminary results of the impact of provision of assistive products with AT services were presented, and, at the request of the MoF and the MoHSP, a five-year budget plan was developed to calculate the total investment required to achieve universal coverage of assistive products in the country.

4.2 Products

Purchase of 6 281 priority assistive products from the national APL.

Prior to this project, assistive product provision was primarily focussed on mobility product[12] provision, which was available at the national and regional level but not in primary healthcare. For this project the assistive product range was expanded to include additional priority assistive products for vision, hearing, and self care.

Capacity

The first step was to build the capacity of the procurement unit to procure high quality, affordable assistive products from the national APL. In consultation with the MoHSP and the NOC, a procurement plan was developed, which included 23 different products; 13 of these had not been provided previously through government programmes in Tajikistan.

[10] In addition to the first roundtable other key stakeholders included: Agency of Statistics (AoS), the National Research Institute on Assessment and Rehabilitation of Persons with Disabilities, representatives of people with disabilities and older people's organizations, members of the WHO team and other United Nations' agencies.
[11] Including older people, people with noncommunicable diseases, people with mental health conditions (including dementia and autism), people with gradual functional decline and people with a disability.
[12] Including walking aids, wheelchairs, and artificial limbs.



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Procurement

A total of 6 281 assistive products were procured from four product categories[13]. This included wheelchairs and walking aids supplied through Consolidating Logistics for Assistive Technology Supply and Provision (CLASP) and shower chairs, incontinence products, reading glasses, magnifiers, white canes, and hearing aids supplied by the China Assistive Devices and Technology Center (CADTC).

4.3 Personnel

Wheelchair service training provided.

A one-day refresher training session on the WSTP-b was organized at the WHO country office in November 2019. Eight people from WHO, NOC, Rudaki PHC and Operation Mercy participated in the training session. The training covered the theory of the 8-steps of wheelchair service provision.

Training in Assistive Products (TAP) of PHC staff.

The NOC coordinated and supported a network of PHCs to develop capacity to provide simple priority assistive products. In June 2022, 25 health personnel[14] (learners) were involved in TAP sessions.

TAP implementation

TAP

Developed by the WHO, TAP is an open access online learning platform that can support community-level personnel to build the skills and capacity required to safely provide simple assistive products selected from the WHO APL.

On the first day, 25 learners participated in training sessions including: an introduction to the project; an overview of assistive products to be provided through the project; and the planned referral mechanism. In addition, participants created accounts on the TAP platform and completed the Introduction to assistive products module.

For the 10 staff from the Rudaki health outposts (whose roles were screening and referral) the training was complete.

The remaining 15 participants (whose roles included provision of assistive products) stayed for a four-day training on specific TAP modules in the vision, mobility, and self care streams[15]. Learners used tablets to complete TAP modules online and mentors supported learners to apply knowledge to their own context, providing supervised skills practice to check key competencies.

[13] Mobility, self care, vision, and hearing.
[14] Three NOC staff, three DHC staff, nine RHC staff and 10 staff from the Rudaki health outposts
[15] Modules included: Mobility assistive products, Walking aids, Therapeutic footwear, Vision assistive products, Magnifiers, Reading glasses, Self care assistive products, Toilet and shower chairs and Absorbent products

Learners

All personnel participating in TAP were from the Rudaki district and were nurses or doctors. To support the training, nine modules were translated into Russian, and learners were provided with tablets to access online content.

TAP outcomes

All learners passed the nine TAP module quizzes (>60% correct answers) and TAP trained staff reported a high level of confidence in providing the assistive products which they received training on. Learners also reported that TAP changed their perception on the importance of AT services.

4.4 Provision

Reviewed and strengthened referral and follow up mechanism with MoHSP resolution, providing assistive products following service provision steps.

A new four-tiered AT referral mechanism was adopted through a ministerial resolution:

- people screened at health outposts were referred to the nearest RHC[16] for 'simple' assistive products, such as walkers and walking sticks;
- people in need of wheelchairs or protective footwear were referred to the DHC; and
- people with more complex needs or requiring more complex products (e.g. hearing aids, white canes, prostheses) were referred to the NOC.

Despite delays due to COVID-19 restrictions, 6 281 assistive products were provided by trained services in Rudaki and Dushanbe between March 2020 to March 2022 using the four steps of service provision (assessment/selection, fitting, teaching and follow up).

Upgrading the NOC to an ATC.

Initial steps have been taken to transition the NOC to an ATC including:

- establishment of vision and hearing units in the NOC through hiring an ophthalmologist and orientation trainer to provide white canes and an Ear, Nose and Throat (ENT) doctor to provide hearing aids;
- procurement of wheelchair tools for assembly and minor repairs; and
- procurement of materials to manufacture pressure-relief cushions.

WHO continues to provide technical support to establish the ATC in Tajikistan.

[16] Three RHCs selected for provision

4.5 People

In total, 4 177 direct beneficiaries (51% female and 49% male) received 6 281 assistive products through trained service providers using a user-centred approach utilising the four-steps of service provision: select, fit, teach how to use, and follow up.

5. Learning

To evaluate the impact of the project, a wheelchair recipient survey was conducted to assess the impact of appropriate products and services. In addition, focus group discussions were hosted with PHC staff who had taken part in TAP to assess the outcomes of providing simple assistive products at community level.

5.1 Impact of wheelchair provision

From September 2019 to March 2021, 309 wheelchairs were provided[17] through trained services as part of the project in Tajikistan. A 'before and after' survey was carried out with 200 wheelchair recipients to measure the effects of the intervention. The survey examined levels of participation, autonomy, health, and product satisfaction through proxy indicators.

Overall, following the provision of high-quality wheelchairs and related services, the wellbeing of respondents greatly improved. The findings suggest that respondents had a more active social life, a higher degree of autonomy and were able to use wheelchairs independently.

The health of respondents seemed to improve, with less people suffering from illness and fewer people reporting accidents. The wheelchairs provided had been reliable and users were satisfied with them[18].

The positive outcomes from this survey were used to advocate the government to invest in the provision of active wheelchairs. Findings demonstrated that active wheelchairs and related services can have life-changing implications for users, demonstrating a positive impact of the activities associated with the project. Furthermore, the findings point to broader benefits for family members and society, in the terms of:

- **Reduced need for caregivers**: An active wheelchair reduces reliance on family members and caregivers, which can free up time for them to engage in other productive activities.

- **Reduction in health problems:** Can reduce associated medical costs that would otherwise fall on families and wider society.

- **Reduced need for product repairs and replacements**: Can reduce expenses related to maintenance and repair that would fall on families or the state.

[17] People were selected by the Ministry of Health and Social Protection in accordance with the government waiting list.
[18] WHO Regional Office for Europe (2022), p.6

5.2 Outcomes of providing simple assistive products

In June 2022, focus group discussions were carried out with TAP learners and directors of PHCs who participated in the project. Focus group discussions aimed to assess the outcomes of providing 'simple' assistive products at community level. Four areas of impact were identified:

Awareness: As a result of the project there was increased demand for assistive products in the community.

> **''We introduced several new products to the community. Since provision started, we have been getting hundreds of calls a-day from people asking where they can get this or that product for their family member or friend.''**

Capacity: TAP was appropriate and effective in providing AT skills to healthcare staff. Recommendations for future trainings included:

i. increasing the time allocated to practical elements of the training;
ii. recruiting real patients with functional limitations for the role-play element in practical sessions;
iii. mentors should play a more active role and teach the modules rather than learners working separately on their tablets.

Impact: Assistive products had significant impact on increasing the autonomy and independence of AT recipients and their families/caregivers.

> **''We provided a 15-year-old girl with a walker and a shower chair. Before she had access to these products two people needed to help her wash herself (one to hold her up and the other to wash her). Now she can do it by herself with a little support from her mother.''**

Need: Products that were in highest demand were reading glasses, canes, rollators for outdoor use, crutches, and toilet chairs. Stocks of these products quickly depleted and there is still a high need for these products in the communities served by the PHCs.

6. Looking ahead

The initiative to integrate AT into health services has proven to be successful in Tajikistan. As a result:

- The Tajikistan National Health Strategy (2021–2030) has been adopted which, for the first time, includes AT and its provision through PHCs. WHO is supporting the development of an AT action plan in 2023 as part of the National Health Strategy.

- The Government of Tajikistan is also exploring project roll-out in three additional regions and is increasing its annual AT budget allocation from US$ 200 000 to US$ 600 000 over a three-year period demonstrating commitment in this area.

- Actionable strategies have been identified to strengthen the existing AT system.

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